

This paper elaborates on the Design and Qualification of support structures for the waveguides, which needs to have the $\pm 0.5\text{mm}$ tolerance though they are supported from the embedded plates (on the building) having the positional error of about $\pm 25\text{mm}$.

By using standardize and easy to fabricate components the cost effective support structure has been designed using off the shelf components and qualified for the all the applicable loads. This design reduces the $\pm 25\text{mm}$ tolerances on the building to only $\pm 0.5\text{mm}$ on the assembled waveguide with sufficient stability. The Support Structure qualification has been done using the Design by analysis approach of the ASME code and the stresses are assessed using the ANSYS tool.